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THE NORTH DAKOTA FARMER



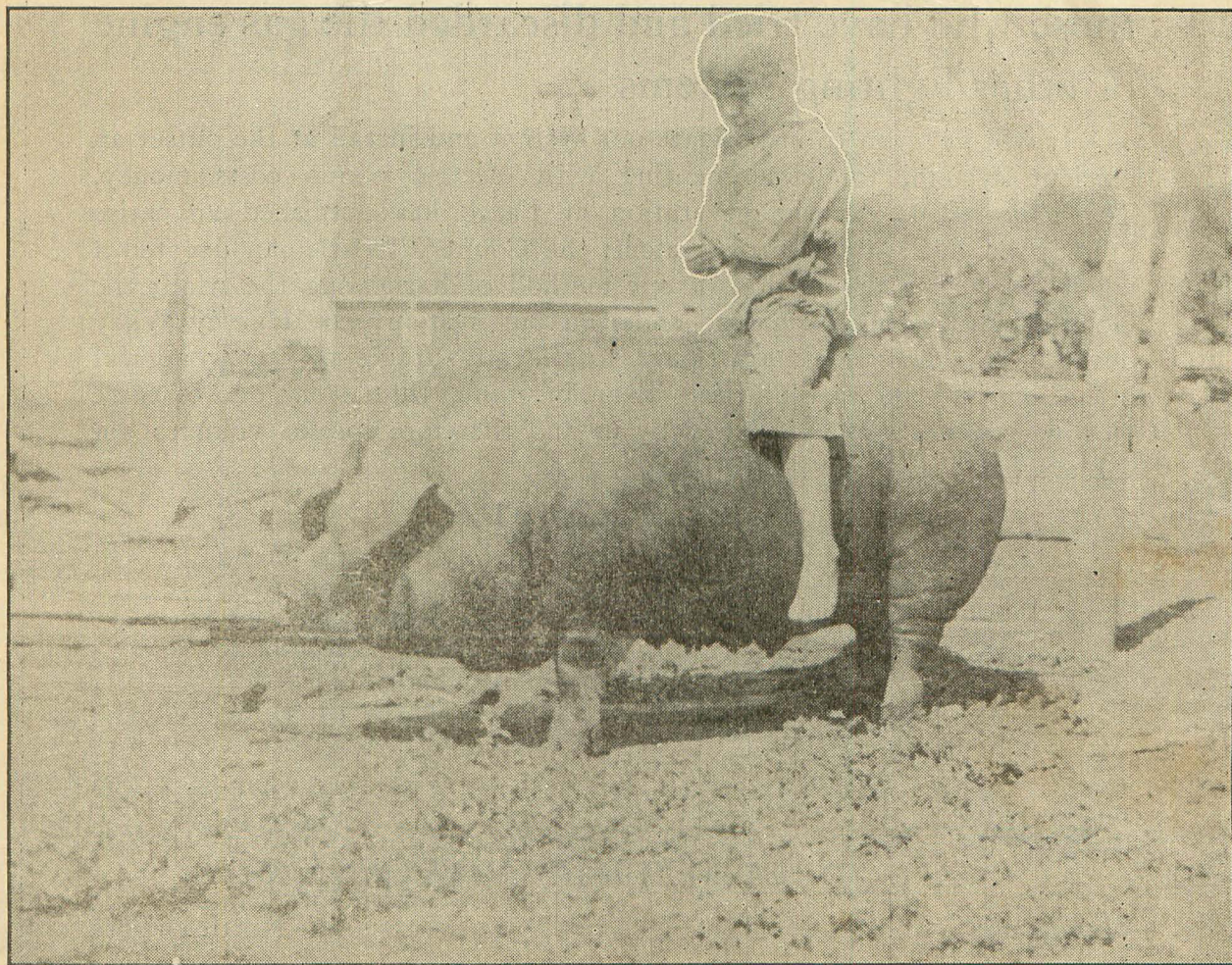
50 Cents A Year

Lisbon, N. D.

October 15, 1916

Vol. 18, No. 4

Take the Kids into Partnership



It was mine when it was a pig and now also it is mine

978.4

N814

Gr2h2m

Equip The Farm With Cheap Electricity

Gasoline is Sky High Wind Going to Waste?
Why Buy Gasoline? Why Not Use The Wind?

HELP Is hard to obtain and harder to keep.
Costs money and so do gasoline and oil.

OUR WIND ELECTRIC SYSTEM

Is an absolute success. Our best advertisers are those who have tried and discarded the gas engine or other lighting systems.

It will pay you to investigate our system and install at the outset an efficient system, for experimenting with electric plants costs money. The government experiment station at Fargo has published an entire bulletin on our wind electric system; the Country Gentleman devoted a whole page to a description of our method of harnessing the wind; the Good Housekeeping Magazine endorsed our system; Dr. Harvey Wiley devoted an entire newspaper page to the advantages of our wonderful invention and its possibilities. Bear in mind that every one of these glowing tributes was unsolicited by us and therefore speaks volumes for the system.

OTHER SPECIALTIES

While our attention is given mainly to the Wind Electric System, we also manufacture Artesian Well Drive Electric Plants; Gasoline Engine Municipal Electric Light Plants; Automobile Trailers, Automobile Switching Systems; Paulson Shock Bucker and Carrier, which displaces six men and six teams in the threshing field.

NOTE THIS: You should place your order early. So great is the demand that you may be disappointed if you delay.

WIND ELECTRIC COMPANY

Wyndmere

North Dakota

THE NORTH DAKOTA FARMER

Vol. 18 No. 4

LISBON and FARGO, N. D., OCTOBER 15, 1916

50 Cents a Year

Let Us Reason Together

THE LESSON OF EXPERIENCE

Experience teaches a dear lesson and many there be that learn in no other school. Several years ago rust ruined the wheat and oat crop in many sections of the state. The southern counties suffered most severely. A reaction set in and many farmers immediately began to diversify. Livestock was purchased, corn cultivated, silos built and alfalfa planted in such proportions that an agricultural revolution seemed most promising. This was true, however, only in some sections of the state. But as years went by and no rust appeared in damaging quantities many farmers fell from grace and plunged back again into the all-wheat method of farming. This year rust came again and its blighting effects are state wide. No such visitation—such a general visitation—has heretofore been recorded, at least not in recent years.

There is no use, however, in crying over spilt milk. The exceptional price of wheat, owing to the European war, relieves the situation to a large extent, but such fortunate prices owing to the unfortunate conditions prevailing in Europe may not occur when the rust scourge occurs again at some future time. The thing to do, therefore, is to forestall, as far as skill and good judgment will permit, the possibility of such a wide-spread visitation of rust or any other cereal disease.

Perhaps the best and only way to do this is to place less reliance upon small grain and distribute the risk of disease and other untoward conditions more widely upon livestock, forage crops, root crops, etc. Such an arrangement also will distribute the farm work more equitably thruout the year and lessen the dependence that farmers must place upon transient labor.

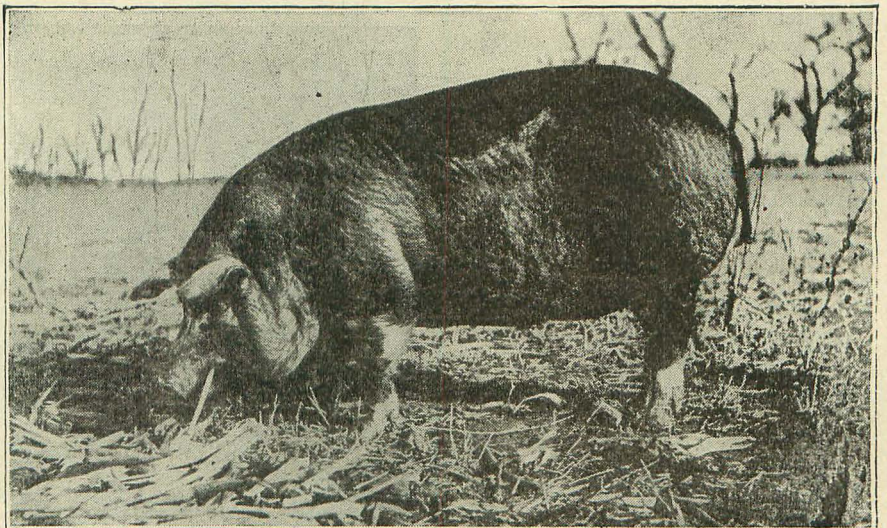
Then there are other and oft-repeated advantages. The soils of our state do not differ materially from those of other states in this, that they wear out with constant taking from

and having nothing returned in the form of fertilizing material. Notwithstanding its exceptional fertility, tho we have the best soil in the world, it will be depleted of its productive strength by constant cropping without receiving in return a fertilizer equivalent proportionate to the demands that are made upon it.

For these and many other reasons farmers should adopt some rotation system that will so diversify their income that the destruction, in whole or in part, of a single crop will not financially cripple them. If it cannot be done all at once, and it seldom can, nevertheless the start should be made at the earliest possible date.

methods of farming, the use of more fertilizer, less waste of bi-products and more labor put into cultivation.

The area of land that can be cultivated being fixed, necessarily more intensive methods of farming calls for more farmers and more farmers mean more farms. The demand for land, therefore, is bound to steadily increase and prices of land will increase in the same proportion. Large holdings will gradually be broken up into smaller farms, and when the federal and state governments take cognizance of the importance of encouraging the ownership of small farms and make some reasonable provision for financing them, even tho land values



Corn and I Await Your Commands

ADVANCING PRICES OF LAND

The price of agricultural lands is steadily advancing. One reason, doubtless, is that homestead lands of good quality and convenient to railroads are rapidly becoming a thing of history. The population of the country, on the other hand, is increasing year by year, and instead of feeding and clothing our people from the products of more acres their sustenance must come from larger yields per acre. This means more intensive

advance, the ownership of medium-sized farms will become more general. Otherwise the curse of tenantry will grow in proportion as land monopoly is made possible.

By "curse of tenantry" I do not mean to cast any reflection upon the tenant, but refer to the unfortunate condition that compels him to be a renter instead of a land owner. No agricultural state can afford not to make it as easy as possible for men to acquire title to land. Under our present loan and banking system this is impossible,

and what makes matters worse the real estate agent too often blights what the others overlook.

It would be interesting to have data showing the number of farmers that are annually driven out of the state thru fore-closure proceedings. The "booster" entices them in, by "fore-closure" they are driven out. This, however, is not universally true. Many bankers are lenient and helpful in the extreme and often suffer loss on account of their own patience. It is the system, or, rather, lack of system, that hurts.

A banking system predicated upon business and commercial needs does not meet the conditions that farmers labor under and for that reason the

chief industry of the state suffers on account of this handicap. What agriculture needs, therefore, is a banking system adapted expressly to meet the need of farmers and the new rural credits law only partly meets this demand. There is too much red tape connected with it and too much initiative required of the farmer.

Germany remedied this by building into her agricultural industry a banking system independent of everything foreign to that industry and free from all commercial encroachments. There are some things which foreigners have worked out in order to make their agriculture stable and independent that we might imitate to great advantage.

enough so that they will not be knocked off by the corn binder. In case of the Dakota White Flint, Gehu and Squaw corn it may be impossible to find such ears. These varieties are used largely for hogging off so that this matter is not so important as it is with varieties used for silage, fodder or grain. Ears on stalks that are easily broken down by the wind should not be selected from any variety. Seed corn can be picked quite rapidly by going thru the field of standing corn with a sack slung over the shoulder into which the ears may be thrown as fast as they are picked. Ears can be picked from three or four rows at a time and emptied into sacks or a wagon at the end of the rows.

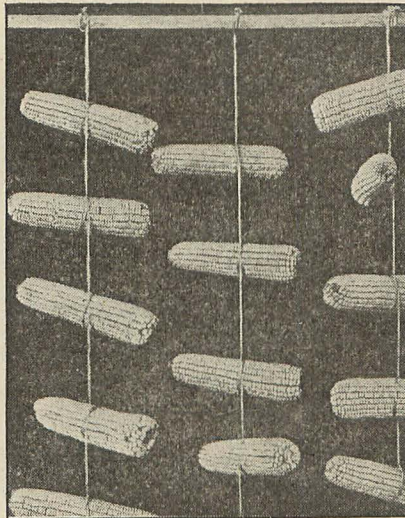
How to Save and Select Seed Corn

By R. C. Doneghue, of the N. D. Experiment Station

One of the results of the light crop of spring wheat this season will be an increased acreage of corn in 1917. If this increased acreage is to result in the production of the largest amount of feed, seed of well matured corn high yielding varieties or strains must be planted. As a rule the highest yield of feed is produced by the variety of strain that will ripen in the average season. Ripe corn has a higher feeding value than immature corn. A comparatively small variety adapted to the climatic conditions of the region will usually produce more feed per acre than a large variety that will not ripen under these conditions. During the ripening period corn loses somewhat in weight but this loss is mostly water. There is an actual gain of the important food constituents.

If ripe corn is to be produced next year it will be necessary to save seed from the home fields this fall. Mature seed is better for planting than immature seed. For this reason corn should be allowed to ripen as long as possible. Picking should not be delayed, however, until killing frosts have reduced the vitality of the seed. It is a good plan to go thru the field and pick the ripe ears as fast as they appear. In case there is a cool spell when the conditions indicate the probability of frost some of the ripest ears should be picked. Corn that has reached the glazing stage makes very good seed if well cured. More care is necessary in drying, however, than with ripe corn. If the corn is frosted so that growth is stopped, a sufficient amount of seed has not been pro-

duced, it should be picked at once and carefully dried. While seed corn can be secured after a frost it will all need to be ear tested. The ear test will show a large percentage to be unfit for seed and the best ears will be inferior



One Way of Drying Seed Corn

to corn picked before frost for seed purposes. If sufficient seed has reached the glazing stage before frost it should by all means be picked. Another point in favor of selecting seed corn from the field is that it is possible to secure seed from the right type of stalks. The stalk comprises quite an important part of the plant from a feeding standpoint and it should receive consideration at the time the seed is selected. Ears should be picked from good sized, strong, vigorous stalks bearing the ears high

As soon as the seed corn has been picked it should be hung up or placed in drying racks in such a way that no ears will come in contact with each other. A simple method of stringing seed corn is to take a piece of binding twine 20 to 25 feet long and after tying the ends together, place a loop over each hand and have a second man place an ear of corn in the middle at the bottom, so that each end of the ear is supported by a strand of twine. The two loop ends are then crossed and a second ear placed over the crossed twine. This operation is repeated by weaving the twine back and forth, cat cradle fashion, until the string of ears is completed. The ends of the loops can then be tied tightly over the last ear and the string hung up to dry. Another simple device is made by fitting a piece of two inch plank with a base which will hold it in an upright position and drive ten-penny finishing nails into it at intervals. These nails should only be driven in enough so that they will support a good sized ear of corn and so spaced that no ears will touch each other. The selected ears can be placed on these racks or trees forcing the nail into the pithy portion of the cob at the butt of the ear. Fence wire nailed in parallel strips to a frame of two by four pieces so that the ears of corn can be stuck thru the meshes with an end resting on each strip makes a good drying rack. The essential points of any system of drying is that the ears should be taken care of as rapidly as possible and that there shall be absolute freedom of contact between ears. This is especially important because mold develops rapidly in the moist corn at points of contact and destroys the vitality of many of the kernels. The strings or racks of ears should be placed in a well-aired room and allowed to dry. If a current of air can be provided by opening windows on opposite sides of the room drying will take place more

rapidly. The air should be kept as dry as possible at all times. While too rapid drying may injure the corn it is a good plan to have some heat in the room in which it is stored, especially after the weather becomes cool. If the corn is picked green drying proceeds slowly and it is difficult

good strains of corn have been developed that are suited in a general way to the various parts of the state and these can be adapted and improved so that they will be better suited to individual farms if some system of growing the seed on a breeding plot each year is followed.

should not be hung up in bunches, nor stored in barrels or boxes, nor put in piles on the floor. It should be kept where the mice cannot get at it. We must not depend upon the crib for our seed corn.

There are about 800 kernels on the average ear of corn, and one poor seed ear means 800 weak, dead or moldy kernels, which if planted, mean missing hills and weak stalks producing little or nothing. We cannot afford to take any chances. We must get our heads in the game. Every banker, merchant, implement dealer, farmer, teacher, and preacher must get busy.

If you are a County Superintendent of Schools, start a seed corn campaign in your community. You can reach the farmers in your county thru the teachers of rural schools, who will in turn see that the school children carry the message home. Bankers, merchants, and implement dealers can write personal letters carrying special seed corn literature to their patrons. Have the editors of the county papers publish seed corn articles. There is no time to lose.

Make a corn survey of your county or community.

1. Get the names of farmers who grow corn and those who do not.
3. How many acres?
3. Yield in bushels per acre.
4. Variety.
5. Did they select seed corn from field or crib?
6. At what time in the fall was it selected?
7. Get the number of head of livestock per farm.
8. Find out who have silos and who have none.

After you have completed your survey arrange a definite program.

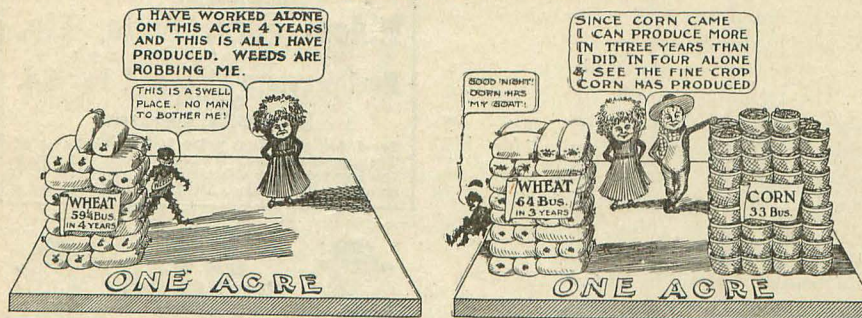
1. Have your Commercial Club secretary, and county agent assist you in organizing a special committee to invite the farmers and business men, their wives and children to a "Get-together Meeting." It may be a picnic dinner. Arrange with a few practical farmers to give talks on corn—the value of proper seed selecting—testing, etc.

2. At this meeting arrange to set aside "Seed Corn Day." Make that a holiday in the community. Arrange to observe the day in all schools in the county.

Contests in judging corn, and tying up seed ears, may be features of the day. The evvening can be devoted to an old-fashioned husking bee. This serves the double purpose of introducing an historical reproduction of colonial days, and affording a new form of social evening, which the entire community, old and young will enjoy.

Corn the Best Partner in Exterminating Weeds

WHEAT NEEDS HELP RETURNS FROM AN ACRE IN FOUR YEARS.



AVERAGE OF 15 YEARS WORK AT N. DAK. EXPERIMENT STATION.
COMPOSITION BY W.C. PALMER
CARTOON BY JOHN M. BAER

to get it completely dried before cold weather. A small stove will keep the air dry in quite a large room and facilitate drying materially. Special drying plants are necessary where large amounts of seed are handled. The cured seed corn should be stored in a dry well-aired room. If placed in rooms or buildings where there is any dampness it absorbs water and is injured by cold weather.

In picking seed corn any especially good ears from good plants should be kept by themselves and planted in a small isolated field by themselves to furnish seed the following year. If this is practiced year after year a strain of corn that is especially suited to a farm can be produced. Several

There is a great variation in the growing season of different varieties. For this reason it is more important that one should have seed of a strain that is suited to his locality than that of any special variety. In developing such a strain much time will be saved if a stock that is fairly well suited to the region is used. The essentials of such a strain are that it shall mature, be a good yielder and show some uniformity of type. In selecting ears for the seed plot or for general planting these points should be kept in mind.

Further details concerning the handling of seed corn will be found in Circular No. 8 of the North Dakota Experiment Station.

Put on a Seed Corn Campaign - Do It Now.

By Prof. P. H. Holden, Director, Agricultural Extension Department
International Harvester Company.

There are more than 100,000,000 acres planted to corn in United States every year, producing about 3,000,000,000 bushels of corn, worth nearly two billion dollars. Over 20 per cent of all of the improved farm land in the United States is devoted to corn growing every year. The United States produces about two-thirds of the world's corn crop.

The average yield of corn in the United States is less than 26 bushels per acre. Just one small eight-ounce ear of corn added to each hill will

raise the average of the United States to 52 bushels per acre, double the yield and value of the crop and add \$1,700,000,000 to its total value.

If every ear of corn intended for planting were harvested at the proper time, and properly stored and tested before planting, millions of dollars would be added to the value of the corn crop every year.

Seed corn should be hung up where the air can circulate freely around each ear. There is no better place than the attic or furnace room. It

Awaken the community spirit. The Trenton, Missouri, Chamber of Commerce has a motto which reads: "Get Acquainted with Your Neighbor You Might Like Him." The spirit of community interest, that which makes for building of town and country, rings in every word of this simple little sentence.

The "Trenton Idea" is to awaken the community spirit. Nothing will create a better feeling among people than for them to get together and talk over their problems, whether they be corn problems, alfalfa problems, weeds, livestock, silo, or problems of the home.

You will find that your round-up meeting will result in a lot of good in many ways. These are merely a few suggestions. You may not use them at all. And again, they may suggest other plans to you which will apply more directly to your local conditions. Whatever plan you have, do not forget to make the women and children a part of it.

THE SCREENINGS PROBLEM

The dockage on wheat the local elevator now runs from 1 to 72 pounds on the bushel. The chief ingredient found in the screenings now is wild oats. There are also found in quantities increasing from year to year; mustard, kinghead, and cockle. In ninety-five cases out of a hundred, the farmer sells his wheat to the local elevator where it is graded and docked and the price determined. Five per cent of the farmers ship their own grain direct to the terminal market.

There are now in North Dakota, four principal ways of meeting the dockage and screenings problem.

1. The local elevator cleans the wheat, giving the farmer the screenings, and charging him one cent a bushel, or in some cases, two cents a bushel for the work. But this can only be done in slack seasons, for during the wheat movement, the elevator is swamped with its own business. The farmer receiving his screenings, returns them to the farm and grinds them for stock feed. If the screenings

are not ground, they may scatter foul seeds about the place.

2. The local elevator cleans the wheat, and ships the screenings in car lots to the terminal market. In this case the farmer is docked on the foul matter in his grain, and allowed nothing for the screenings. One manager, last year, made \$2000 on his screenings; another made \$5000. The screenings were sold at fifteen dollars a ton. If the elevator is a farmers' elevator, these profits are pro-rated back at the end of the year. If it is a line or independent elevator, the farmer gets nothing back.

3. The farmer ships his own grain to the terminal market, has it cleaned there, and the screenings sold. In this way he gets full price for his screenings and escapes with little or no dockage on his wheat.

4. The farmer ships his own grain to the terminal market and sells it uncleaned. Here he suffers the dockage which the State Inspection Department finds he deserved.

N. D. IMPROVED SEED GROWERS AND OTHERS, TAKE NOTICE

Annual Contest at Devils Lake, Nov. 14, 15 and 16

As Secretary of the North Dakota Improved Seed Growers' Association I wish to call to the attention of the farmers and citizens of the state that the Annual Seed Growers' Contest occurs this year at Devils Lake on dates of November 14, 15 and 16, meeting with the Grimm Alfalfa Growers' Association, the North Dakota Potato Growers' Association and the Lake Region Annual Fair.

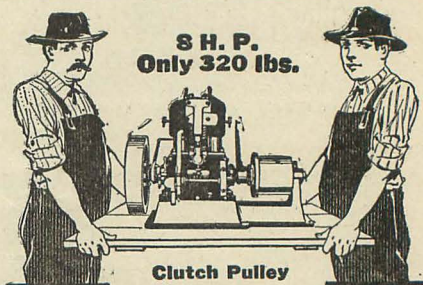
Mrs. Clark W. Kelley, local director of the Devils Lake Branch Association has authorization from the State Association to receive all exhibits for the contest, and will superintend the taking of the samples to be analyzed and tested at the Pure Seed Laboratory. All exhibits for the Annual Seed Contest should be mailed or expressed to Mrs. Kelley so as to reach Devils Lake by Oct. 28th if you wish to have the samples entered for the

major prizes of the Seed Association.

All samples will be properly saved and placed on exhibit by the local committee at Devils Lake. It is essential that the exhibits be sent in at the early date named in order that the samples for analysis and test may be



You can be sure of the highest possible price for
Hides, Furs, Pelts, Etc.
if you ship to the old reliable
Northwestern Hide and Fur Co.
Est. 1890
Minneapolis, Minnesota
Send for quotation price list and catalog of Trappers Supplies. We give a good luck watch for free for every shipment or purchase of \$5.00 or over. Reference: Any bank in Minneapolis

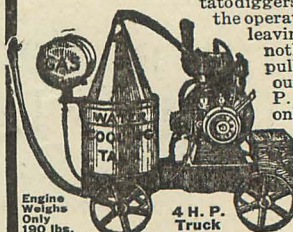


Pick It Up and Walk Off

Did you ever see any other 8 H. P. Engine two men could carry? Cushman engines are the lightest weight farm engines in the world—easy to move around and put to work anywhere. No longer necessary to put up with old-style, back-breaking, heavy weight engines, with their violent explosions and their fast and slow speeds. The Cushman weighs only about one-fifth as much, per horsepower, but with its modern design, accurate balance and Throttle Governor, it runs much more steadily and quietly.

Cushman Light Weight Engines

40 to 60 lbs. Per Horsepower
The 4 H. P. weighs only 190 lbs. Mounted on iron truck, as shown below, it may be pulled around anywhere. Besides doing all other work, it may be attached to moving machines in the field, such as grain and corn binders, potato diggers, etc., driving the operating part and leaving the horses nothing to do but pull the machine out of gear. 8 H. P. 2-cyl. weighs only 320 pounds. Sizes up to 20 H. P. Not cheap engines, but cheap in the long run. Book free.



Engine Weighs Only 190 lbs. 4 H. P. Truck
CUSHMAN MOTOR WORKS
881 North 21st Street Lincoln, Nebraska

BORING AND REAMING OF CYLINDERS

We rebore and ream all sizes of auto and gas engine cylinders fitting same with larger pistons and rings. We weld all Metals. Our machine shop is equipped to handle both large and small work. Send your next job to.

DAKOTA WELDING AND MANUFACTURING COMPANY

203-5th St. N. : : : FARGO, NORTH DAKOTA : : : Telephone 926

may be made before the contest occurs.

This should be the most important contest ever held. The year gives promise of an opportunity for the Association to do great good in bringing growers, buyers and users of seed together so that the best possible seed may be used on the land. Seed of high quality is scarce. Do not hesitate to exhibit what you have for sale.

The big premium list is now in press and shows over \$1000 in cash prizes. The list will be sent to all parties who wish to aid in the distribution. Any one wishing copies should send in their name and address at once to either Mrs. Clark Kelley at Devils Lake, or H. L. Bolley, Agricultural College, N. D.

FOR THE LAND'S SAKE GROW ALFALFA

Alfalfa leaves the land richer in organic matter and nitrogen than before it was grown. Organic matter and nitrogen are two things very necessary to have in the soil in order to grow good crops. In continuous grain growing organic matter and nitrogen are wasted. It has been found that in continuous grain growing five times as much nitrogen as the crop uses is lost from the soil. There is also a rapid loss of the organic matter. When a grass crop or a legume crop is grown organic matter is added to the soil. The grasses do not add nitrogen but the legumes do, which makes them more valuable than the grasses. A legume as alfalfa produces more hay too than any of the grass crops and the alfalfa hay has a higher feeding value.

Alfalfa will improve the land and at the same time produce more food for livestock than any other crop grown.

GREAT BIG POTATOES SCARCE THIS SEASON

With a small supply of great big potatoes in prospect as a result of the mediocre crop this year Hazen J. Titus, superintendent of the Northern Pacific dining-car department, is casting about for this food in sufficient quantities to serve patrons until another season produces more bountifully. His prestige as the discoverer of the "great big baked potato" is at stake, he says.

Mr. Titus will soon start on a search of the Northwest for tubers each to weigh one and a half pounds or more. He already has received

several offers from producers and shippers to supply his needs but says he would be glad to have any others who have this vegetable in sizes required by the Northern Pacific standard write him. He expects to contract for large quantities during the next few weeks.

STACKING CORN

Corn fodder contains so much moisture that it will mold in the stack unless great care is used. One way is to make the stack narrow, not wider

than the length of a bundle and a half. Another way that has been used by the North Dakota farmers with a good deal of success is to put down a layer of corn bundles, then a layer of dry straw and so on. The straw takes up enough of the moisture to keep the corn from molding.

IF YOU WANT A GOOD HOME

Try a Central Missouri Farm. Two good lines of Railroad. Good schools; Railroad division; best of water. Write R. F. White, Elden, Mo.



Whenever there is sickness among your farm animals—when they are off-feed, dull-eyed, rough of coat, and don't gain as they should, **look out for worms** and indigestion, the cause of 90 per cent of all live stock losses. Keep your farm animals free from worms; your stock will thrive better on no more feed; there'll be less sickness, fewer losses and bigger profits.



SAL-VET is the world's most widely used and successful preparation for destroying worms. It is easy to give—no dosing, drenching or starving. Animals eat it freely and **rid themselves of the deadly parasites.**

Fill out the coupon and I will send you a valuable

SAL-VET Live Stock Book FREE

and give you the name of my near-by dealer, from whom you can get enough SAL-VET to last all of your stock sixty days. He will refund your money if SAL-VET fails to rid them of stomach and free intestinal worms and put the animals in good condition. Address

SIDNEY R. FEIL, President
THE FEIL MFG. CO., Chemists
Dept. 141 Cleveland, Ohio

PROOF!

"My hogs were coughing terribly, and there were cases of cholera within a mile from my farm. I began to feed SAL-VET and found my stock simply wild for it. The coughing has stopped and the pigs are doing well."

C. W. S. Northrup,
Rt. 6, Smith Center, Kas.

Costs But Little

—only one-twelfth of a cent a day for each hog or sheep; one-third of a cent for each horse, mule or head of cattle.
Sold only in packages of 10 lbs., 20 lbs., 40 lbs., 100 lbs., 200 lbs., 500 lbs.—never loose or by the lb.

SIDNEY R. FEIL, President
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Dept. 141-10 -16 Cleveland, Ohio
Send me your Free Book on care of live stock.

I have.....hogs.....sheep.....horses and
mules.....cattle.

Name.....

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Shipping Sta.....State.....

DURUM WHEAT WANTED

We are in the market for a few cars of choice

DURUM WHEAT also MILLET SEED

in either car lots or small shipments. Mail samples for our bid.

FARGO SEED HOUSE

Fargo,

North Dakota

Political Issues that Affect the Producer

The Necessity for Preparedness for Peace

When the European war is ended and the conditions which protect American producers even more effectively than a protective tariff have ceased to exist, then will come a crisis in the history of our country. Twenty million women in Europe have gone into occupations formerly reserved almost exclusively for men. An immense army of labor must be provided with work. The military organization in Europe now controls peaceful occupations and this condition will necessarily continue. One combination of countries will not trade with the other combination. Each set will produce stuff to sell. America is the open market. It is a fool's paradise in which we live, if we do not look forward and see this approaching danger.

Manufacturers of products and the producers on the farms of Europe and South America will seek the rich American market and force us down to their level in price, unless we are prepared.

On this issue the two political parties are absolutely and clearly divided.

The Republican party stands for the protection of the American producer and the American laboring man, while the Democratic party says there is no need of protection, and the bars should be down for the coming of our competitors.

Government Expenses

The appropriations made by the Democratic congress are at the rate of more than two billion dollars a year.

Appropriations have been increased four-fold since the Democratic critics attacked the Republican administration for the "billion dollar congress."

Preparedness for defense does not constitute a large item in this appropriation. Take away the item for preparedness, and the Democratic administration has increased expenses of the Gov-

ernment over the last Republican administration twenty-three per cent a year.

The Democratic administration has also created over thirty thousand more offices and provided numerous boards and commissions, places in which to put Democratic politicians.

On this issue there is a clear division between the two parties.

The Republican party stands for decreased appropriations, doing away with the pork barrel, the establishment of the budget system, and efficient government everywhere.

Mr. Hughes is especially strong on this subject of taxation and expenditures, and his record is such that it commands the confidence of the country. Mr. Wilson's record is made up of extravagance, Pork Barrel, and two billion dollars a year.

Farm Credit Law

Yielding to the demand of the country for a system of farm credits that would enable the owner of a piece of land to secure a loan at a reasonable rate of interest, the last congress passed a measure which in no way meets the desires of the farmer.

It is bound up in red tape, it is almost impossible to understand, and is made just as unworkable as any law can be made and still retain the form of promise.

Keeping Us Out of War

The Democratic party boasts that President Wilson "kept us out of war." As a matter of fact, the refusal of other countries to antagonize us further has kept us out of war. No nation in Europe could be forced to take a position that would mean hostility from the United States.

Into Mexico, the President has twice sent an army of invasion, the first time for a trifling excuse.

If Mexico had fought back, we would have been in war.

On the other hand, the administration has refused to protect

the rights of American citizens and has calmly permitted hundreds of American men to be killed and women outraged.

This is a plain statement of fact, which everyone who knows conditions in Mexico will confirm.

Arbitration

The Republican party stands for the principle of arbitration as the right way to settle disputes. Mr. Hughes has plainly stated that **reason and justice should prevail, not force.** With the object of getting votes at the election this time, the Democratic party, in the Adamson bill, has taken the opposite ground, the only excuse being the political exigency. The Democrats say they prevented the strike by the passage of the Adamson bill. **Unless arbitration is established, the trouble is merely postponed.** They could just as easily have prevented the strike by passing an arbitration law as by surrendering to the demands of one side and placing a burden of increased expense upon the country.

This expense will be borne at the end by the working man and the farmer, for they eventually pay the freight.

Mr. Hughes

The record of Mr. Hughes is such that it appeals to the confidence of the people.

He saved holders of insurance policies millions of dollars and probably prevented eventual bankruptcy of insurance companies.

As Governor of New York, he was fearless and successful in his fight for honest, forward measures.

His position is always clear, his judgment sound and his actions quick.

Against him is a policy which is described by its author as one of "watchful waiting," which is sometimes characterized by the public as "weakly wabbling."

GOVERNMENT CROP REPORT

Washington, D. C., Oct. 9, 1916.—A summary of the October crop report for the State of North Dakota and for the United States, as compiled by the Bureau of Crop Estimates (and transmitted thru the Weather Bureau), U. S. Department of Agriculture, is as follows:

Corn

State: October 1 forecast, 13,660,000 bushels; production last year (final estimate), 9,800,000 bushels.

United States: October 1 forecast, 2,720,000,000 bushels; production last year (final estimate), 3,054,535,000 bushels.

All Wheat

State: Preliminary estimate, 39,000,000 bushels; production last year (final estimate), 151,770,000 bushels.

United States: Preliminary estimate, 608,000,000 bushels; production last year (final estimate), 1,011,505,000 bushels.

Oats

State: Preliminary estimate, 54,300,000 bushels; production last year (final estimate), 98,000,000 bushels.

United States: Preliminary estimate, 1,230,000,000 bushels; production last year (final estimate), 1,540,362,000 bushels.

Barley

State: Preliminary estimate, 26,000,000 bushels; production last year (final estimate), 44,800,000 bushels.

United States: Preliminary estimate, 184,000,000 bushels; production last year (final estimate), 237,009,000 bushels.

Rye

State: Preliminary estimate, 2,633,000 bushels; production last year (final estimate), 2,700,000 bushels.

United States: Preliminary estimate, 41,884,000 bushels; production last year (final estimate), 49,190,000 bushels.

Flaxseed

State: October 1 forecast, 8,330,000 bushels; production last year (final estimate), 6,534,000 bushels.

United States: October 1 forecast, 15,400,000 bushels; production last year (final estimate), 13,845,000 bushels.

Potatoes

State: October 1 forecast, 7,690,000 bushels; production last year (final estimate), 7,200,000 bushels.

United States: October 1 forecast, 301,000,000 bushels; production last year (final estimate), 359,103,000 bushels.

Hay

State: Preliminary estimate, 801,000

tons; production last year (final estimate), 660,000 tons.

United States: Preliminary estimate, 85,225,000 tons.

Prices

The first price given below is the average on October 1 this year, and the second the average on October 1 last year.

State: Wheat, 125 and 82 cents per

bushel. Corn, 85 and 57. Oats, 40 and 25. Potatoes, 97 and 41. Hay, \$6.60 and \$5.10 per ton. Eggs, 23 and 20 cents per dozen.

United States: Wheat, 136.3 and 90.9 cents per bushel. Corn, 82.3 and 70.5 cents. Oats, 44.5 and 34.5 cents. Potatoes, 112 and 48.8 cents. Hay, \$10.36 and \$10.69 per ton. Cotton, 15.5 and 11.2 cents per pound. Eggs, 28.1 and 22.3 cents per dozen.

After a Year's Test

Under every day conditions this impartial authority wrote this letter. Read it. Your experience with Carbola will be the same. You can rid your poultry house of lice and mites—you know how important that is to the welfare of your flock—and at the same time, at no extra cost for labor or material, paint them a snow-white by using

CARBOLA
The Disinfecting White Paint

a mineral paint combined with a germicide 20 times stronger than carbolic acid, but neither caustic nor poisonous. Comes in powder form ready to use whenever convenient. Just mix with cold water and put on either with brush or sprayer. Will not blister, flake or peel. Will not spoil by standing.

Use It Instead of Whitewash

in poultry house, cow-barn, hog-pen, creamery, cellar and out-building to prevent the germs of all infectious disease from getting a foot-hold in flock or herd. Get some today from your dealer and have it handy.

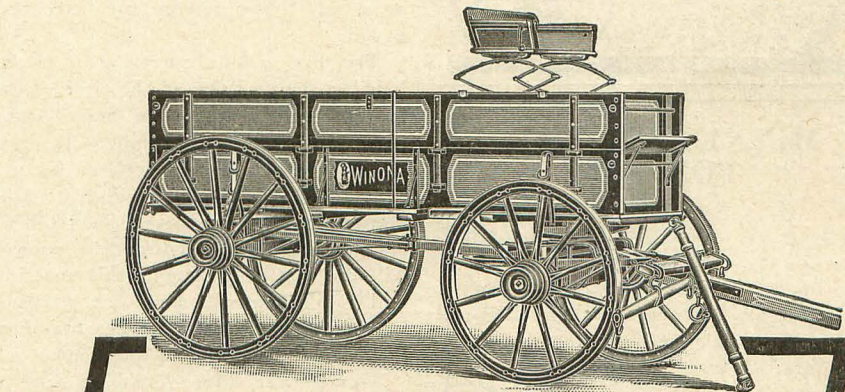
10 lbs. (10 gals.) \$1 and postage. 20 lbs. (20 gals.) \$2 delivered.
50 lbs. (50 gals.) \$4 delivered.

Trial package (covers 250 sq. ft.) and booklet for 25 cents postpaid. Write us today if your dealer won't supply you.

CARBOLA CHEMICAL COMPANY

Dept. J

7 East 42nd Street New York



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WINONA FARM WAGONS

OUTER bearing axles prevent breakdowns. Clipped gears, strongest wheels in the world. Bent, double-riveted Felloes. Strongest Skins, Poles and Hounds. Substantial extra cleated Boxes. Durable painting.

Write for Catalog F showing different styles of Winona Wagons with details of their unequalled construction.

WINONA WAGON COMPANY, Winona, Minn.

POTATO DEPARTMENT

NORTH DAKOTA POTATO ASSOCIATION

For several years there have been very effective State Potato Associations in the principal potato growing states. Seeing the advisability of such an organization in North Dakota, and after some discussion extending over several years, a number of potato growers met recently and established an organization to be known as the North Dakota State Potato Association. The chief objects of the association are to promote the raising of pure varieties of potatoes for all commercial and seed purposes; to give special attention to seed improvement and dissemination, especially in relation to standard commercial varieties; to improve sorting and grading methods on the farm and at loading stations and to co-operate with the National Association in the establishment of standard grades and adopting a label to be attached to

such standard grades; to promote the raising of desirable types of potatoes and encourage the elimination of undesirable types; to assist in maintaining proper cultural practices; to promote all available means of controlling or preventing potato diseases; and to assist in securing better marketing and transportation facilities.

An annual convention and potato exhibit is to be held each year. The establishment of local potato organizations to be affiliated with the state organization will be encouraged wherever advisable.

All potato growers and all persons representing commercial interests concerned in the potato industry in North Dakota are eligible to membership in the Association. The dues for membership are one dollar per year.

The potatoes from North Dakota are much in demand for both seed and table purposes. Much of their popularity is due to the general freedom from diseases. As more potatoes are grown in the state more disease is likely to appear. It is thru a well-organized state association that the future of the potato industry can best be looked after in North Dakota. All growers and shippers of potatoes should join the association at once and help it from the beginning in establishing policies that will be of most value to all people commercially interested in potatoes.

The officers elected are A. D. Andrews, Mapleton, President; H. O. Werner, Fargo, Secretary-Treasurer, with Walter Reed, Amenia, Peter McLachlin, Hunter and J. E. Eastgate, of Larimore on the executive board.

The first annual meeting is to be held at Devils Lake at the time of the North Dakota Improved Seed Growers Convention, November 15, 16. Liberal prizes are being offered for potato exhibits by both the Potato Association and the Improved Seed Growers Association. Any potato grower will do wisely to attend this meeting and to also enter some of his potatoes in the potato show. The premium list will be published in due time.

Membership dues should be sent to H. O. Werner, Secretary-Treasurer, Agricultural College, North Dakota.

GRADING POTATOES FOR MARKET

H. O. Werner, Secretary N. D. Potato Association

Probably the most important factor in potato growing is the matter of good seed, even tho the grower does not always realize this. Next to that, and in North Dakota often even of

more importance,—is the matter of marketing the crop to good advantage. Good seed governs almost more than anything else,—the quality of the potatoes that will be harvested and the price that can be secured for them.

The matter of grading potatoes has received very little attention in North Dakota, altho it is one of the most important phases in the marketing of the crop. Recently in a convention of commission men at Indianapolis, one of their number in an address made this statement, "Fully fifty per cent of the labor, expense and facilities connected with the distribution of food in the markets of the country is made necessary in order to do what the producer has left undone or has done wrong." Probably this is very true, when one considers the cost of labor and high rent in the big cities together with the fact that many dealers find it necessary to re-sort their potatoes before selling them. In addition to this expense is the item of freight on a lot of dirt and worthless cull potatoes which had better be kept at home and fed to the livestock.



Yours FREE

If you are a land-owner and do not already have a copy of Ropp's New Calculator—write for yours today. This 160-page book (worth 50¢) answers almost any question that arises on the farm. We will send it free to landowners only, postpaid, together with a catalog of

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—the fence that outlasts all others. The Square Deal Lock is self-draining and double grips every stay and strand wire without cutting, breaking or slipping. The one-piece stay wires prevent sagging, bagging or buckling. The wavy strand wires give springiness—life. Write for Free Book today.

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MINNESOTA FARM FOR SALE

160 acres good clay loam land 3 miles from Leonard, Beltrami County, Minnesota. On state road, 1 mile to school and church. 40 acres under cultivation, balance fenced for pasture. House, barn, granaary and other buildings in good condition. Scandinavian settlement. A bargain at \$30 per acre on easy terms. Write for particulars to

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Before you buy any more fence, write for facts about our 26-inch ECONOMY HOG FENCE at 14¢ c. per rod. Many other styles and prices.

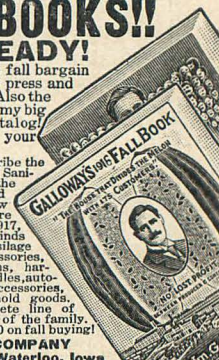
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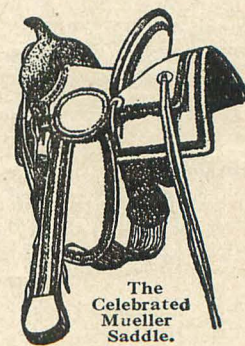
My new 100-page fall bargain book just off the press and ready to mail! Also the second edition of my big 250-page 1916 catalog! A postal gets your copies today.

These books describe the famous Galloway Sanitary Cream Separators, the Galloway Gasoline and Kerosene Engines, the new modern Galloway Manure Spreaders, our New 1917, 12-20 H. P. Tractor, all kinds of farm machinery, ensilage cutters, power house accessories, grinders, buccies, wagons, harness, fencing, roofing, saddles, automobiles, stock tanks, auto accessories, sewing machines, household goods, carpets, furniture, complete line of clothing for every member of the family. Write now! Save \$200 to \$500 on fall buying!

WM. GALLOWAY COMPANY
987 Galloway Sta., Waterloo, Iowa



A\$45 Saddle, \$36 Cash



The Celebrated Mueller Saddle.

Our latest Swell Fork Saddle, 14-inch swell front, 28-in. wool-lined skirt, 3-in. stirrup leather, rig, made of best oak leather, guaranteed beef hide covered solid steel fork.

THE FRED MUELLER

Saddle & Harness Co., Dept. R. 1413-15-17-19 Larimer St. Denver, Colo. Send in your name for our catalogue now ready.

READ THIS

There must be a reason why there is such a demand for Justin's Boots. If you are going to wear boots, why not wear the best? Yours for the Best Cowboy Boots Made. Send us your address on a postal card and we will send you our catalogue, and self-measuring system.

GIVE US A TRIAL

H. J. JUSTIN & SONS
Mfrs. of Justin's Celebrated Cowboy Boots. NOCONA, TEXAS



No matter how good or high-priced the market, the highest price will always be paid for the carefully graded potatoes, and in seasons of poor prices the ungraded potatoes will frequently sell at a loss or very much smaller profit than graded stock. As an example, in this season of exceptionally high prices, the following potato market conditions are noted in a report dated Sept. 9, 1916:

Kansas City \$1.35 to \$1.50 per bushel
 Minneapolis \$1.25 to \$1.50 per bushel
 Chicago \$1.25 to \$1.50 per bushel
 New York-Jersey No. 1 \$2.75 to \$3.00 per bbl. (180 lbs.)

Maine \$3.15 to \$3.25 per 165 lb. bag
 Long Island \$3.00 to \$3.25 per 165 lb. bag.

These figures show that in Minneapolis and Chicago some one on the market was willing to pay 25 cents more per bushel for some potatoes than for others. On the New York market the New Jersey potatoes have the reputation for poor grading while Maine and Long Island stock is carefully graded. The financial gain thru the grading is readily appreciated, for on the above date, New Jersey potatoes at the highest price sold for less per barrel, or just equal to the lowest price for Long Island and Maine potatoes marketed in bags holding even less than a barrel.

Coming more nearly to home are the Moorhead, Minn., quotations of 75 to 80 cents per bushel for ungraded and 87 to 88 cents per bushel for graded potatoes on October 4th.

One of the most successful growers' organizations in the country is the Eastern Shore of Virginia Produce Exchange. They grade their potatoes carefully with the result that their Red Star Brand potatoes always sell easily at 25 cents more per barrel than other potatoes.

One of the most extreme cases in the grading of potatoes, yet one that shows the possibilities, is the method used by some Idaho and Montana growers in shipping big baking potatoes to New York City. These potatoes are graded and boxes labeled to show the contents. Some boxes contain tubers weighing between eight and ten ounces, some not less than ten or more than twelve ounces, etc., while in some boxes each potato is guaranteed to weigh one pound or more. These potatoes usually sell in New York at an advance of \$1.00 per bushel over the finest New York or Maine potatoes. Marketing like that has its limit, but it shows how great are the opportunities for the producer.

The first step in grading potatoes is the growing of good, smooth, uniform potatoes. This is done by careful seed selection and then by plowing

deep and giving the potato field the best of care all thru the season. If the greatest portion of the potatoes are of the desired type the amount of labor in sorting will be greatly decreased and the amount of culls will be lessened.

It is generally considered that to be first grade,—potatoes should be run over a one and seven-eighths inch screen for round potatoes and a one and three-fourths inch screen for long potatoes; they should be of one variety, reasonably clean, firm, mature and practically free from scab, late blight, sunburn, frost, mechanical injury or other external imperfections, a tolerance of 5% by count and 10% by weight to be allowed. This is the standard adopted by a number of Potato Associations. Some require a larger mesh screen and some a smaller. Practically free from scab generally means not over 15% showing scab and these to be spots less than one-half inch in diameter and no deep spots.

Individual potato growers may frequently think it inadvisable to grade potatoes unless they are very large

producers. In these cases, co-operation of several or a number of growers in a community, in establishing market grades, will be one means of solving the problem. Another way is to establish a state-wide brand under the auspices of the State Potato Association. No matter what method is used to establish the grade used, any determined continuous efforts in the line of grading potatoes are sure to meet with success and bring the potato grower much of the revenue from his potatoes which now goes to the various dealers.

LOOK! We want Shipments of
 LIVE and DRESSED

POULTRY

CREAM - CHICKENS - TURKEYS
 DUCKS - GEESE - GUINEAS

Pigeons, Calves, Hogs, Beans, Cattle Hides, Horse Hides, Pelts, Furs, Muskrat, Skunk and Rabbits.

WRITE FOR PRICE LIST and
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The R. E. COBB CO.
 E. THIRD ST. ST. PAUL, MINN.

Reboring and Grinding of Cylinders

**This is the time to fit up your steam engines and
 gas tractors for the coming season**

We can rebores and grind your cylinders, fit new oversize pistons and rings, make and fit new crank pins, straighten shafts, bore and bush gears and clutches or do any kind of machine work. Refue boilers and replace stay bolts. We carry in stock all sizes of stay bolts, patch bolts, bracket bolts, rivets, boiler flues, stay-bolt taps and boiler taps, shafting, shaft hangers, cast iron pulleys, woodsplit pulleys. Write and let us quote prices on any work you have.

Craig Brothers, Fargo, N. D.

P. O. Box 295. - - - - Telephone 554 W.

NORTH DAKOTA SCHOOL LAW

For the first time since 1911 has the State published a volume of the School Laws, and not until 1919 will another edition be printed by the State.

WOULD YOU KNOW

For what reasons a pupil may be suspended or expelled?

Whether one is allowed to read the Bible in school?

What branches must be taught every day?

For what purposes the school house may be used?

Who may vote on school matters and what are the voters' qualifications?

How schools may be consolidated?

What recourse one has if he is not satisfied with the ratings of the examining board?

Whether free text-books may be adopted without a vote?

What to do when a pupil or parent disturbs the school?

What provision is now made for transportation of pupils?

How pupils may be compelled to attend school?

Whether children may be employed in stores and factories?

How a certificate may be revoked?

What the law is regarding drinking cups, fire escapes, hitching posts, school libraries, pension fund, accredited diplomas, etc.?

THEN ORDER A COPY OF THE LATEST SCHOOL LAWS

Price, post paid, 30 cents.

W. G. Crocker,

Lisbon, North Dakota

North Dakota Farmer

Entered as second class matter in the postoffice at
Lisbon, North Dakota

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W. G. CROCKER : : **PUBLISHER**
Lisbon, N. D.

J. H. WORST, : : **EDITOR**

BUSINESS MANAGEMENT, LISBON, N. D.

ASSOCIATE EDITORS

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Remittances should be made by Draft, Post-office Order or Express Order.

Address all business correspondence to the Lisbon office.

Vol. 18 OCTOBER, 1916 No 4

Small yields with remunerative prices are almost as encouraging as big yields and low prices.

The eleventh International Dry-Farming Congress will convene in El Paso, Texas, October 19.

The weather conditions have been ideal for plowing. If winter finds any fields unplowed, whose fault will it be?

Corn need not hang its head this year. Now is the time to decide to make it one of the rotation crops on your farm.

If measures now under way succeed the farmers of North Dakota will not be at the mercy of the Yucatan twine trust.

Next month the North Dakota Farmer will emphasize the subject of legumes and will have something to say regarding the care of live stock.

Happy is the farmer this year who has a car-load or more of fat hogs, sheep or steers for the market. The rust did not interfere with their growth.

If the farmers of the state realized the value of the grouse they would pass a law protecting them the year round, regardless of the pleasure-seeking huntsmen.

Many of our faults will have to be corrected by our children, not the least of which will be to restore to the soil the fertility that we are now mining out of it.

Better take stock of your farm equipment. Are you conserving the

time and strength of the folks in and about the house as well as those of the workers in the field?

From general appearances more plowing will be done this fall than for several years, and earlier. As the late Jas. J. Hill used to remark: "Early plowing means two or three more bushels to the acre at harvest time."

The high price of print paper is cause for the printer's discontent. Just why paper and gasoline should soar skyward has not been satisfactorily explained except on the theory that the manufacturers are bent on taking all the traffic will stand.

If the straw that is burned every fall were converted into manure and restored to the soil it would materially increase the prosperity of the state. The plea that no other use can be made of straw may be true, but a system of farming that makes the burning of straw an economic convenience is in need of renovation, if not revolution.

A trip thru almost any section of the state reveals many well-planned farm buildings and not unfrequently these buildings are protected by thrifty groves of trees and shrubbery. All this indicates thrift in spite of greater prosperity that might be enjoyed if farmers paid more attention to the co-operative distribution of their farm products.

Hereafter we shall devote considerable space to potato growers' interests. The Potato Association of North Dakota meets at Devils Lake next month. It is not too late to send your exhibit. In ordinary seasons this state produces excellent tubers. Why not join the Association and promote this feature of diversification?

With a packing plant located at Grand Forks the northeastern part of the state will find a good market for their livestock right at their doors. Perhaps ere this is read the Equity packing plant will be located farther south or west which will afford competition within the state. These enterprises indicate progress and farmers should give them their patronage, both in selling and buying.

Too many contend that so long as farmers prosper as a general rule they have no grounds for complaint, regardless of how many tolls middlemen take out of their products. The

farmer, however, is entitled to all that his labor and investment warrant and it is his business to secure it by every legitimate means at his command. At the same time he must take into consideration the services that others render his industry and cheerfully concede them as fair remuneration for their work as he demands for his, tho without permitting them to fix the remuneration both ways.

It has been asserted that Holland devotes one-fourth its revenue to the support of refugees from Belgium, a noble example. Albania with her 200,000 starving people is now calling for help. The people of North Dakota, notwithstanding the partial failure of the small-grain crop, is wonderfully blessed. Those who wish to contribute to this unfortunate nation, a most unfortunate "bystander," should send to The Balkan Relief Fund, under the auspices of The Christian Work, 70 Fifth Avenue, New York City.

PUBLISHER'S NOTICE

Owing to the great advance in paper of nearly 125% and materials of 50%, the subscription price of the North Dakota Farmer will be advanced on December 1 to 75 cents a year.

Offer

Until that date we will accept subscriptions at the present rate of 50 cents for one year, or \$1.00 for three years. If you prefer you may have for \$1.00, the North Dakota Farmer for two years and as a premium either the Document Box, or a pair of 6-inch Nickel Plated Pliers, or a pair of Self Sharpening Shears or a North Dakota School Law, or a subscription to the Rotary.

The North Dakota Farmer has for its motto, "Not how much, but how usable." We strive to furnish seasonable material each month. We do not attempt to cover a large amount of territory. North Dakota is our field and as a state farm paper we work unselfishly for the best interests of the farmers of the state, always **building** and **boosting**. Notwithstanding the fact that we are a state publication, we welcome as subscribers those farmers of our neighboring states who believe in a clean, reliable, scientific farm paper.

Please renew your subscription, tell us our faults and pass on to your neighbors whatever of value you find in us.

Yours for service,

W. G. Crocker

PUBLISHER

Livestock Department

FARM AND STOCK NOTES

N. J. Shepherd

If suckling pigs need treatment give it thru the sow.

The amount of the product does not always measure the profits.

To pull a horse's head into an unnatural position is unnecessary torture.

With no class of stock does mixing breeds promiscuously work well.

While the pigs are sucklings, feeding the sow will mean feeding the pigs.

As a rule, the cleaner the feed and feeding places the better the pork made.

A pig gains more in weight from a given amount of food than any other animal.

There is no work on a farm too light for the draft horse where a horse is needed at all.

A horse trained to a moderate quick walk will command a readier market at better prices than a slow animal of otherwise equal merit.

It is a safe rule never to undertake more than you can do at the right time and in the proper manner.

The most valuable horse to the user of horses is the one that will do him the greatest amount of work at the least expense.

That system of farming is best which markets the products of the farm in the most compact form and leaves the greatest amount of fertilizer behind.

At no other time in the life of the animal is the influence of liberal or of scant feeding so great as when the animal is young.

Generally, that producer is most successful who keeps himself in the line of the market; who gives some thought to the problem of how he can best please the buyer.

The pig will give a larger return for food than any other farm animal, but the returns made will be in proportion to the kind and quality of the food given.

When weakened by underfeeding or made sluggish by overfeeding the natural powers of procreation are equally enfeebled and the capacity of the animal in a normal state of health is greatly reduced.

The man who keeps geldings or mules for his farm work secures only their labor in return, while the man

who keeps draft mares receives not only their labor but in addition their colts.

The improvement of the pig has been directed toward hastening the race from birth to market and when we let them go without gain for a time we set back the wheels of progress that much.

The object of the general farmer should be to produce, as far as possible, everything that his family and his livestock will use and have a surplus of those products that can be most readily marketed, yet will take the least quantity of fertilizing elements from this soil. In this way he reduces his outlay to a minimum and gives himself an opportunity to realize on a variety of products.

With fattening animals, as the amount of fat increases beyond a certain limit nervous force decreases in proportion. Instead of being restless and uneasy from hunger there is a quiet laziness that the feeder likes to see. In this condition there is far less waste of moisture from the system by evaporation than there is when the animal is thin in flesh and the animal will require and drink less water than in the early stage of feeding.

MARKETING LIVESTOCK AND MEATS

Marked variation in methods of marketing meat animals in different sections of the United States and in methods of marketing different classes of animals in the country as a whole has been found by specialists of the U. S. Department of Agriculture from a survey of the livestock marketing conditions of the country. The data obtained by the survey have been published as Part V. of a report of an exhaustive study of the meat situation in the United States.

The three general methods of marketing found to be in most common use are:

Shipping to the large centralized markets, selling to local butchers and packers, and the sale of farm-prepared meats to dealers or consumers. The bulk of the animals from the Central States, it was found, is sold thru the centralized markets, while some form of local marketing predominates in the extreme eastern, western, and southern sections.

The great central markets handle

CLASSIFIED ADS.

One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

LIVE STOCK

WORLD'S CHAMPION A. R. RED POLLS!
Minnesota Champion A. R. Guernseys
Consistent Winners in the 1915 Show Ring
20 of our foundation cows average 601.6 lbs.
butterfat, official.
Jean Du Luth Farm, : Duluth, Minn.



Purebred Registered HOLSTEIN CATTLE

The wonderful vitality which is characteristic of the purebred Holstein-Friesian breed is strikingly shown in the career of Jetske Roe's Aaggie's Artis, owned by F. M. Nichols of Lyndonville, Vt. She is nearly twenty years old and in April was carrying her sixteenth calf. For fifteen gestation periods she totaled 232,500 pounds of milk which, at 4 cents a quart, would be \$4,620, at a cost for feed for fifteen years amounting to \$1,980. She thus shows a profit of \$2,640, in addition to which must be reckoned \$6,000 worth of fine healthy calves. She has won many ribbons and prizes at fairs and has seven daughters with A. R. O. records. There's big money in the big "Black and White" Holsteins.
Send for FREE Illustrated Descriptive Booklets
Holstein-Friesian Association of America
F. L. Houghton, Sec'y Box 267, Brattleboro, Vt.

ENVILLA STOCK FARM

Cogswell, N. D.

Will quote you special prices at any time on Angus Cattle, Feeding and Breeding Sheep, Shetland Ponies, Duroc Jersey Hogs, Wolf Hounds, Collies, Rat, Bird Dogs and other breeds, Angora Cats. All varieties of chickens, turkeys, geese, ducks, guineas, pheasants, rabbits, ferrets. Pets. Live Foxes, Skunks, Mink and Badgers.

Bixby's Red Polls

My herd bull, J. D. Merryweather, No. 24396, is the son of J. D. Millie, A. R. Grand Champion cow at Minnesota and Montana, in the 1915 show-ring and won the milk and butter contest with Guernseys, Jerseys and Brown Swiss competing with records of 600 pounds butterfat. J. D. Millie weighed 1280 pounds at thirty months old, and is full sister to the World's Champion two-year-old heifer. J. S. BIXBY, : : LISBON, N. DAK.

FOR QUICK SALE

Crowded for range, am compelled to sell 40 head of mares and geldings. Address Patrick McDonnell, Ennis, Mont.

ROCKY HILL SHROPSHIRE. Twenty-five head of registered ewes for sale reasonable. Also, a nice smooth bunch of ram lambs and a few aged rams Ernest Palfrey, Hope, N. D.

PLEASANT GROVE FARM REYNOLDS, N. D.



Grand Forks Co., N. D., offers some of the finest registered Shropshire and Hampshire and Oxford Rams for sale. Better order now before they are all sold. Write to R. E. Strutz, Bismarck, N. D.

four-fifths of the sheep and lambs, two-thirds of the hogs, and approximately one-half of the beef cattle. For local slaughter about one-third of the beef cattle, one-eighth of the sheep and lambs, and one-twelfth of the hogs are sold. Nearly one-third of the hogs and about one-tenth of the beef cattle and one-twentieth of the sheep and lambs are slaughtered on farms and ranges. Relatively more sheep are shipped in carload lots by owners than any other class of livestock. Cattle, hogs, and calves follow in the order named. In sales to local buyers hogs lead, with calves, cattle, and sheep following in order.

The study discloses that the time of buying stockers and feeders and the selling of finished animals is restricted too generally to a few months of the year. Should stock-feeding operations be better adjusted to market conditions, a decided influence toward a more even distribution of the supply would be the result.

HOLSTEIN AND GUERNSEY HEIFER AND BULL CALVES. Choice selected promising dairy calves, practically pure Holstein and pure Guernsey, but not registered, nice color. \$20.00 each, all express paid to any point in North Dakota and adjoining states. Order two, you will be so well pleased you will want more.—Meadow Glen Yards, Whitewater, Wis.

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WANTED: To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

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MISSOURI AUCTION SCHOOL
FREE CATALOG KANSAS CITY, MO.

Cooperative associations of cattle raisers are becoming an important factor in marketing, the report shows. Seven hundred and fifty organizations which market cattle in a cooperative way now exist in 15 states. Four hundred and thirty of these organizations are primarily livestock shipping associations. The greatest activity of this sort was found in Minnesota, where 215 cooperative livestock shipping associations are located. The Department specialists declare that these associations bring greater returns to the farmers because of the reduction of marketing expenses and the realization of the prevailing prices at the centralized markets, and that they are also valuable because of their educational features.

Stockyards and Packing Establishments

The system of centralized livestock markets in the United States is the largest single factor in the marketing of meat animals. It is noteworthy that this system is peculiar to the United States, no other country having developed such markets for their livestock. Not only is livestock sold for slaughter at the centralized markets, but a large proportion of stocker and feeder cattle also passes thru these market centers.

The chief outlet for food producing animals in this country, the study discloses, is wholesale slaughtering and meat packing. Such industries usually are associated with the great centralized markets. More than 1,200 slaughtering and meat packing establishments were operating in the United States in 1914, and turned out products worth \$1,651,765,424. The specialists report that one of the striking features of the industry is the concentration of ownership. Packing establishments buy directly from the produce in California to a greater extent than in any other state or section. This practice, which in the opinion of the specialists, will continue to be important in those parts of the country remote from centralized markets, is most characteristic of the western group of states in general. There is a decided difference of opinion among producers, marketmen, and packers as to the effects of this practice in sections supplied with central markets on the general market prices of livestock and on the prosperity of cattle raisers.

Municipally owned or controlled abattoirs are becoming increasingly important in the local marketing of livestock, the report shows, and are displacing rapidly the old type of slaughterhouse. Public abattoirs have been established in 22 cities and 13 states. Local conditions should deter-

mine whether or not a city should build its own abattoir, and a thorough examination of conditions, therefore, should be made before definite action is taken.

Great variations were found to exist in the losses of and damage to livestock in transit on different railroads. On one road the claims paid amounted to 19 per cent of the revenue during a certain period, and on another to less than 5 per cent.

The correlation between average livestock and meat prices over relatively long periods is closer than is generally understood. When the price of livestock rises or falls, meat prices tend to change in the same directions.

Market Returns

In order to secure information as to the relative cost of the different factors or steps in the processes of marketing animals and the proportions of the final price reaching the farmer and other parties to the transactions, the specialists traced several typical lots of beef cattle from producer to consumer, both thru centralized markets and where the animals were disposed of locally. In the former case the farmer's share of the gross returns ranged from 54 per cent to 85 per cent, while from 2 per cent to 5 per cent went to pay market expenses, 2 per cent to 9 per cent was received by the packers, and 8 per cent to 33 per cent by the retailers. In the local sales, from 62 per cent to 84 per cent of the gross returns was received by the farmer and from 15 per cent to 38 per cent by the retailer. The detailed figures indicate, however, that even when account is taken of the fact that lower grade stock is sold locally the returns from such sales are not as great relatively as those from sales thru centralized markets.

HOGGING DOWN CORN

The hogs at the North Dakota Experiment Station are husking their own corn. The flint varieties were mature enough to begin "hogging down" nearly four weeks ago. At the Edgeley Sub-station corn is also being "hogged down." In previous trials in "hogging down" corn at the North Dakota Experiment Station the hogs have given returns averaging \$30 per acre. Trials have been made in comparing the returns from corn "hogged down," as compared to corn husked and fed the hogs. The best returns have been given by the hogs helping themselves to the corn. This saves the work of husking and hauling the corn to the hogs.

When the corn is "hogged down", such early maturing varieties as the

Gehu and Squaw corn can be grown. These would be a little difficult to husk due to the ears being so close to the ground, and they can not be handled by machinery for the same reason. Growing such varieties makes it possible to start the corn feeding earlier than would be possible with the larger varieties of corn. In this way "hogging down" corn lengthens the corn feeding season before cold weather.

GLANDERS

According to the North Dakota Experiment Station, glanders is an infectious disease affecting horses and sometimes attacking man. One of the symptoms is the formation of ulcers in the nose and a discharge, mixed with blood, but without an offensive odor, from the nose. The glands under the jaw often swell. Swellings often occur on the legs, ulcers sometimes form on the skin, the coat is apt to be dull, and the affected horse loses flesh.

The discharges from the nose contain the germs which shows how easy it is for a glandered horse to infect a watering trough or manger. It also gives an idea of the care that needs to be exercised when glanders is in a community in order to keep well horses from becoming infected.

Horses that come from a distance whether brought by horse traders, immigrants, or gypsies, sometimes are affected and so spread the contagion.

There is no cure for glanders and being so contagious it has been found best to kill glandered horses. The sooner they are killed and destroyed the less danger of other horses becoming infected. This is so much of a community problem that in North Dakota the state pays the owner of a glandered horse, that is killed by one of the agents of the state, a part of its value.

Sworn Statement of NORTH DAKOTA FARMER Made Under New Postal Laws

Editor, J. H. Worst, New Rockford, N. D.
Publisher, W. G. Crocker, Lisbon, N. D.
Owner—W. G. Crocker, Lisbon, N. D.

There are no bonds, mortgages or other securities outstanding against the NORTH DAKOTA FARMER.

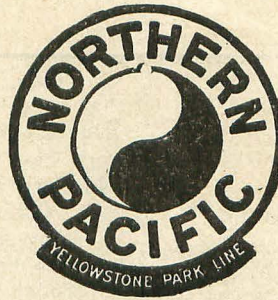
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By W. G. Crocker,
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Sworn to and subscribed before me,
this 1st day of October, 1916.

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Poultry Department



POULTRY TOPICS

Michael K. Boyer

Mismanagement Mistakes

For the past few years quite a number of rich people have engaged in the poultry business by establishing brooder and egg plants on their vast estates. Many of these failed to make a success of it, and the cry has been: Where is the living in poultry culture when rich men, with all their capital, and with the assistance of experts, fail to make it pay?

In many cases the proprietor erects gothic houses for his stock, and invests large sums of money in other unnecessary matters, which are anything but practical. Businesslike, he will sum up the outlay, and charge the business with six per cent for the loan of the money. He will hire an expert at \$1,000 a year, and this salary is added to expenses, as it should be. And about the first thing the expert does is to call for changes in the houses, in the machinery, in the breeds, and in many other things, and more money is put in play that could have been avoided had the start been made by a man who understood what he was doing. Of course, legal interest for all this must be charged. All these changes take time, and naturally keep back the progress of that plant; and in a few years, just about the time matters are beginning to move along smoothly, the proprietor becomes disgusted, closes up shop, and another failure is added to the list.

The great trouble is that in many of these cases the proprietor knows nothing at all about the business, and is apt to be led by advice from every Tom, Dick and Harry who "just as a favor thought he would inform him." For such men it is difficult to give satisfaction, no matter how good the expert may be.

We have a case in mind of a farm owned by a wealthy man who had in his employ a man fully qualified to make a success, but it seems the plant was nothing but a dead loss right from the start. We were invited to call and point out what was wrong. We carefully looked the situation over, examined the feeding tables, and "the rules made by the proprietor, thru suggestions of friends"—and then we catechised the manager and got his views. After we were all thru, we went to the proprietor and suggested

that he destroy those rules, spurn all voluntary advice, and let the manager work out the problems. We plainly told him that the system was all right, and the manager was all right, but that he himself was all wrong. It was a bitter pill, but he swallowed it. Today the manager is making a success, for the reason that he has been allowed to show his hand.

In a number of cases, too, cheap labor is employed to manage these plants, and the proprietor, himself a novice, cannot wisely dictate. The successful farms are those to which the proprietors give their personal attention, they being experienced in that line of work. There are a great many men in this country who, when working under an experienced man, are excellent help but if allowed to manage the affair themselves are miserable failures.

Lack of attention to the details of management is the chief cause of failures, coupled with the common custom of leaving such management to hired help. The man who invests his money, and has it always at stake, is the only person who can care for his stock with a view to any future profit. I do not mean to say that it is absolutely necessary that the proprietor of a plant should clean the coops, and otherwise perform the dirty work of his farm, but it is beyond question necessary that he should be "within striking distance" of his plant, to see that the details are performed properly, and that his flock is thriving accordingly.

A careless and indifferent proprietor, too, is apt to change a good employee into one of the same spirit. On the other hand, a shiftless fellow can often be trained into careful work. I know of a young man once noted for his carelessness and forgetfulness, who, being employed by a careful poulterer, soon fell into his ways, and today is the most trustworthy man on the place.

Economy, mindfulness of the details, regularity in the performance of the duties, carefulness in all the work, and always on hand, are nuggets of gold in the poultry business. They avoid many disasters, and make success more of a certainty. Where a man has capital and experience, and where he is likewise endowed with

good business sense, he generally succeeds. But without capital and experience, as well as the proper qualifications, it is very hard for him to make a success. It won't do to be handicapped. Begin small according to the amount of money and experience available, and gradually grow.

A Sadly Neglected Industry

No livestock are more neglected than poultry. Just anything, it seems, is good enough for chickens. Some people even border onto cruelty. Much of it is thoughtlessness—I cannot believe that a cruel spirit is in these people.

It should be the rule of every livestock keeper, whether it be cows, horses, hogs, chickens, dogs, or anything else, that has life, that they must be given proper food, proper care and proper housing.

It is nothing uncommon to go among people who compel their fowls to roost in trees, or in open sheds where the wind whistles thru. Such people never expect eggs during winter, neither do they look to have as many fowls by spring as they had in early fall. There is no telling the amount that freeze to death under this heartless exposure. The apology these people make is that this exposure makes fowls hardy. Probably it would be a good idea to let the owner have a treat of that method for maintaining health.

Another class put up a regular box of a house, with boards thrown over for a roof, and this they have the gumption to call a "well-made hen house—not very fancy, but all that is needed."

While each year marks improvement in the condition of poultry on the farm, there still remains much missionary work to be done. There is no reason why poultry culture should be a sadly neglected industry.

FOR SALE. Well Bred Up R. C. Reds. First prize winners; cockerels, \$1.25, pullets, 50c. Mrs. John Henderson, Bx228, Beulah, N. D.

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Over 30 years a breeder. Stock and eggs for sale. **MICHAEL K. BOYER, Box 27, Hammon, New Jersey.**

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School and Home



Miss Ura Leader,
Ruraldale, N. D.,
Dear Miss Leader:

Before this time you must have realized that corn has again proven its worth on North Dakota farms. The most peculiar thing about corn is that it does this every year. A bumper crop of wheat rises up about once in ten years and blackens both eyes of King Korn, but corn "comes back" every time.

Don't you think, Miss Leader, that it is about time for people in this state to quit taking corn as a joke? Corn has come to stay. The acreage devoted to corn during the next few years no doubt will be doubled many times. Corn has been tried and proven

There are many advantages in growing corn, and but few disadvantages. But there are a few points which must be considered if the greatest profit is to be derived from the crop.

When the first state-wide corn show was held about twelve years ago there was hardly a good exhibit in the whole show. The corn was badly mixed. The ears were too large, most of them were immature. There was hardly a pure variety of corn found in the state.

There are several good varieties well-suited to the state at this time. The use of poor seed has much to do with small yields at this time. Look well to the seed corn. The boys and girls of the state have done much in making improvement along this line. The corn club work has been a mighty factor.

Another big drawback to the production of corn is the lack of stock. Corn will be grown primarily as a rotation crop and to assist in cleaning up the weeds, insects and diseases. It ought not to be grown primarily as a sale crop. It is therefore necessary to have stock in order to properly dispose of the crop.

Corn requires proper culture if the results previously mentioned are to be obtained. If the culture is not thoro, the corn field may become the best weed producing place on the farm. It is the culture and not the crop that has the beneficial effect on the soil.

Early planting and good culture are essential. But first comes good seed.

There is a great deal of poor corn seed planted in North Dakota. Let us consider something of how to obtain good seed.

As you well know corn is a cross-pollinated plant. It is easily mixed. In all corn fields you will find many types and variations. There will be short plants and tall plants; early and late ears, and good and bad individuals in many different respects.

The possibilities of improving the corn crop thru seed selection is marvelous. First, I advise that the corn grower begin with the best foundation stock of a variety well-suited to his locality. Every year from that time on the grower should practice the most careful seed selection. Some of the important things to consider are: height of stalk, height of ear, position of ear, maturity, productiveness, and lastly, ear characters.

By all means start with a well-improved variety adapted to your locality. Different varieties are suited to different sections. Some are more useful for one purpose than for another. At this time there are several good varieties of both dent and flint.

Gehu is the earliest of the varieties common to North Dakota. It is a small yellow flint. The ears grow very close to the ground, but it yields well and makes a good variety for feeding in the field. It is almost sure to ripen every year in this state.

Dakota White flint is quite similar to Gehu, except in color as the name indicates. It is perhaps a little larger.

Mercer is one of the best varieties of corn for the state. It is a flint variety of yellow color, medium in maturing, and a good yielder.

Northwestern dent is probably the most popular variety at this time. This variety shows great variation and different strains are adapted to all parts of the state.

Minnesota 13 is a larger variety but does well on warm soils of the southern part of the state. It is a well-bred variety, yields well, and is becoming more and more popular.

Rustler White dent is a still larger variety. It is suited to the warm

soils in the southern part of the state.

There are many other varieties grown but these are among the more important. They offer a sufficient range in size and maturity to meet the requirements in all parts of North Dakota.

Corn offers good opportunities for improvement. I advise that you take up lessons in saving and caring for the seed. These lessons are exceedingly important. Write the College for information on these subjects. They are well covered and in an interesting manner.

This month you are also to take up the subject of farm equipment. This is more difficult and there will be more trouble in getting the equipment for the class work. No doubt the best way will be to visit some of the farmers and study the equipment which they have.

It will be well also to visit some farm machinery salesman in the town. Such men have a great deal of good material on types and kinds of machinery.

Let the Station send the bulletins which have been published. You will find them valuable.

Sincerely,

O. O. CHURCHILL.

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Playground Games, 10 cts. Rules for playing the more common games of the school ground.
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Westland Educator, Box F - - - **Lisbon, North Dakota**

HOW TO KEEP YOUR FLOWER BULBS THRU WINTER

Cannas, Dahlias and Gladiolas Must have Certain Attention if You'd Have Flowers next year.

Cannas, dahlias and gladiolas, are all classed as tender perennials, that is, plants that live and bloom year after year but are not able to withstand the cold winters. Freezing of the root or bulb destroys them. These plants may be allowed to grow until the first heavy frost comes, killing the crops. Attention should then be given them right away.

For cannas and dahlias the tops should be removed about six inches from the roots, the roots dug, and the loose soil shaken out. They may be allowed to dry a few hours in the sun and then placed in permanent storage. To keep perfectly, they should be cool and dry. Any place in which potatoes will keep will be ideal for them.

For gladiolas it is not necessary to wait for a frost which kills the crops. Just as soon as the crops are dry the plants may be dug and allowed to lie in the sun to cure for a few days. When the stalk is dry, it should be cut off to within an inch of the corm. The thoroly dry corms are then placed in flat trays anywhere out of the reach of frost. The same place that cannas and dahlias are stored will be satisfactory.

"BEEF RING"

The "Beef Ring" is a scheme for providing a regular supply of fresh meat on the farm in the summer time. It has been used with a good deal of success in many places. Agricultural Extension Bulletin No. 5 entitled the "Beef Ring" gives a plan for organizing a beef ring. Copies can be secured from the Extension department of the North Dakota Agricultural College.

MATERIAL FOR PROGRAMS

Do you want material in preparing for a debate, or address, or play, or declamation, or essay or anything else in that line? What you want has been collected and put into one of the package libraries at the North Dakota Agricultural College. These package are loaned to persons requesting them and can be kept 21 days. By request an extension of time can usually be secured where it is needed.

These package libraries made up of clippings, articles, pamphlets, magazines, papers, or wherever the in-

formation could be found, have been found very convenient by those who have used them. The package library has this advantage over the library in that the information on each subject has been brought together. If it is a debate, the package library has material on both sides of the question. If an address is to be prepared, material on it has been gathered from several sources.

There is no charge, but the borrower pays the postage or express.

THE HOT OR COLD LUNCH

The cold lunch which has been the common noon meal in the rural schools is being replaced by a hot lunch. It has been found that when the children have a hot lunch they get along faster in school. The Extension Department of the North Dakota Agricultural College has issued a bulletin on the Hot Lunch. The bulletin shows how simple and inexpensive the hot lunch can be made.

SOME OF THE SIMPLEST PRINCIPLES OF AGRICULTURE

By Chore Boy

Farm Equipment

The farm is a home and a business combined. When farm equipment is considered, the home and the business of the farm can not very well be separated. Running water in the home cuts out some of the hardest work the housewife has to do. It makes the home more sanitary and provides easier bathing facilities than are otherwise possible which should

mean more comfort, better health and more vigor. And again the running water is used 365 days in the year while the binder which will cost nearly as much is used only a week or ten days a year. A furnace that heats the whole house, keeping it a uniform temperature does much to add to the comfort and health of the family and it cuts down the work of keeping the house clean. The furnace can be used about 200 days in the year while a corn binder for instance costing about as much is used only five to ten days in a year.

The object of machines is to cut down labor. Investigations have brought out the fact that it takes only one-sixth as much labor to produce a bushel of corn now as in 1855. This is very largely is due to the improved corn machinery that is now available as compared to the tools used in 1855. Not only does machinery cut down labor, but it makes possible doing many things that are impossible without machinery or at least not practical. The plow not only makes pos-



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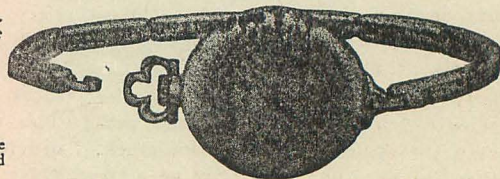
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sible preparing much more land than spading but it does it with very little human labor. The same is true of practically all the machines used on the farm.

There is another side of farm machinery that is usually overlooked and that is the few days in the year that each machine is used. The plow is used some 30 to 40 days; the grain drill, 10 to 14 days; the corn planter, 2 to 10 days; the mower 6 to 10 days; the corn binder, 5 to 10 days. These are all expensive machines and yet they stand idle nearly the whole year. Machines make money for you when in use; they cost you money when idle.

Try and figure out how many days the different machines on your father's farm are in use. In factories they want the machines to work every day and in many of them they have two shifts of men one set working in day time and another at night so as to keep the machines busy day and night. It would seem that two or three farmers might co-operate in the use of some of the more expensive machines and in that way secure more days of service from the machine.

It will sometimes pay to rent a machine rather than own it; i. e., where it can be rented.

The days of service secured from most machines are rather few as compared to that secured from machines in factories. On recent investigation shows that the average day's service secured from a sulky plow is 119; from a grain drill 76; from a mower, 46; from a grain binder 53; and from a corn binder 40. This shows the need of giving the machines good care. It ought to be possible to secure more days service from these machines than the figures given above and it is. Figure up the number of days' service secured from the different machines on your father's farm and see how they compare with the figures above.

In the above paragraphs it has been shown that farm machines are used only a few days in the year and that they render but comparatively few days of service. This does not mean that the machines should not be used, as they are indispensable, but it does mean that these things should be considered as they are an important part of the farm business. The few days that a farm machine is used in a year rather emphasizes the importance of such home conveniences as running water in the home that can be used every day in the year. This means that they are saving labor and giving comfort 365 days in the year when the grain-binder only saves labor for a week to 10 days.

Livestock and buildings are in one sense a part of the farm equipment but they will have to be treated in another article as the space has been used up and too many things at once are confusing instead of helpful.

To the Teacher: Having the pupils find out how many days in the year each machine is used and also how many days service is secured from each machine will make a splendid lesson in arithmetic and farm economics, both for pupils and parents.

FARM EQUIPPED WITH WIND POWER ELECTRICITY

The power of the winds is one of the oldest sources of energy, not only for propelling ships but for mechanical work such as pumping and grinding, in various parts of the world. Strange to say, in spite of this fact, as a branch of engineering the construction and design of a proper wind motor has been greatly neglected and has lagged far behind most other lines of mechanical progress. Everyone recognizes the fact that there is a vast amount of free energy in the intermittent movement of the winds and the feature of the intermittancy has doubtless been the cause of this class of work being a neglected art.

The remarkable progress made in all lines of mechanical and electrical engineering has developed ways and means to wipe out entirely the obstacles that arose from the uncertainty of the wind movement. The mechanical refinements of bearings and parts with the scientific understanding of the principles involved all around resulted in very great simplification on the one hand coupled with the direct application of the electric generator and the latest type of storage battery and the automatic switchboard on the other hand.

The wheel illustrated is designed to extract the utmost amount of power. It is built to withstand severest wind conditions and thus secures reliability. Reliability is also increased by the remarkable simplicity in design, on which patents are now pending. The wheel is absolutely devoid of any moving parts whatever, in sharp contrast with the conventional type of windmill which is loaded up with bevel gears and pinions or reciprocating parts that are continually wearing out, causing the gears to get out of mesh, which results in annoyance and vexatious delays. These old-type windmills have gears continually wearing out, poor bearings necessitating incessant oiling of places to which constant attention cannot be given.



Perfection Smokeless Oil Heater

—a Household Necessity

In the fall before the furnace fire is needed—in cold weather, when the furnace fails to keep the corners warm, a Perfection Heater takes the chill away and makes the whole house comfortable.

The Perfection Smokeless Heater may be easily carried about from room to room—the handle does not get hot.

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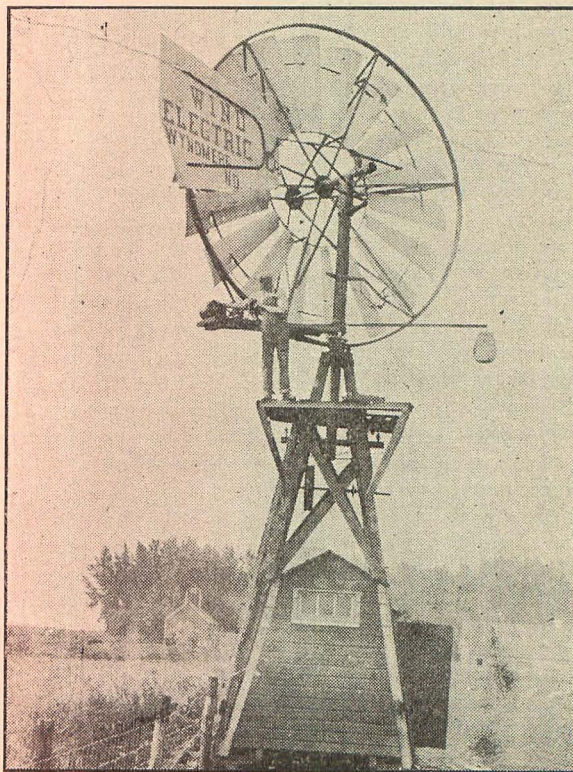
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The public has come to associate the old type power windmills with nerve racking, screeching and grinding year in and year out until the machine is abandoned. This machine is practically noiseless and remains so thruout its entire life. It uses an extremely small amount of oil and attention. This wheel, with the exception of generator and silent chain, will run for a period of one year without oiling.

The wheel is mounted upon the head which is in turn mounted on a 7-inch pipe 8 feet long. Directly back of the wheel is mounted an

ings which are known as Timken long series roller bearings. These represent the last word in high grade bearings and they are used by the highest grade of automobiles and trucks. They are so constructed that no wear whatever comes upon the wheel shaft or axle but upon the hardened cones which can be replaced by anyone. In the same manner the cup which these rollers run on is also hardened and can easily be replaced. This bearing is so constructed that it takes all end thrusts. Since it runs in oil there is little wear or friction.

The wheel is governed by turning



First Wind-Electric Plant installed on the Manikowske Farm, near Mooreton, N. D. The time will come when thousands of North Dakota farms are thus equipped.

angle iron sheave 15 feet in diameter. This drives the generator thru a silent chain and 1 inch rope belt. The generator is fixed upon a floating platform fastened by a hinge to the bottom of the eight-foot pipe. This platform is 6 feet long. At the outer end is a counter shaft over which the rope travels; at the other end of the counter shaft is one of the silent chain sprockets. The generator being located on this platform receives its power from this sprocket. One can readily see that this wheel is much more efficient since there are no gears whatever and since the power is taken direct from the wind wheel. The wind wheel rests on two roller bear-

each blade upon a pivot, varying the effective area and angle of the blade thereby. The blade has to turn only about 30 degrees to govern the wheel thru all ranges of wind velocity. The governor weights which turn these blades are attached near the outside edge of the wheel, making them very sensitive and the wheel governs very closely in any wind. It can be left out in the wind in a storm and the wheel will not travel above a certain speed. This makes the wheel absolutely safe from blowing down in any winds outside of a cyclone and the strain on the tower is much less than where another wheel is used of the same size without this method of

governing.

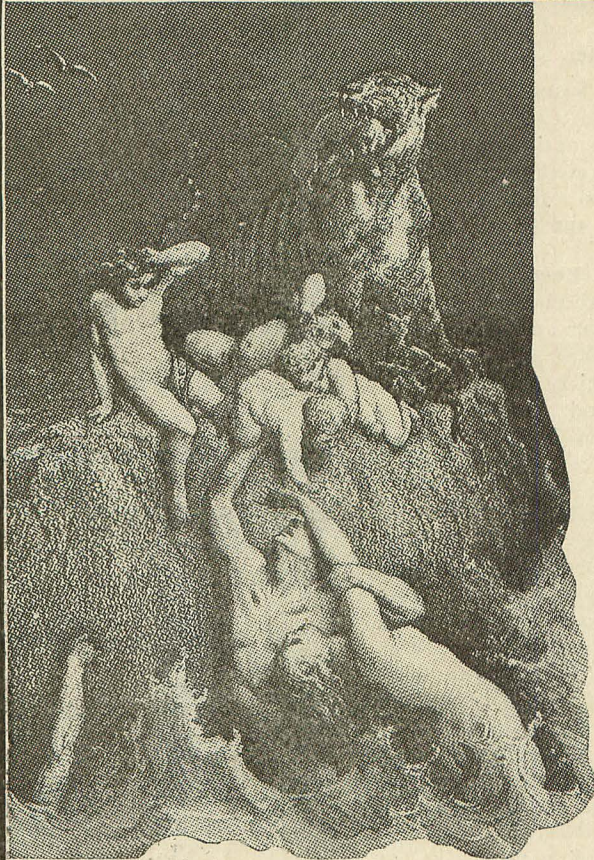
A specially wound generator driven by this special electric wheel generates the electricity, which is taken by wires thru the automatic switchboard to the storage battery. Here the electricity is stored for periods of calm. Enough electricity can be stored for periods of two to six days' use without wind depending upon the

size of storage battery used and current used. The automatic switchboard allows the plant to be run by one without a technical knowledge of electricity, in fact it can be run by anyone. This is due to the fact that the switching system is automatic. When the battery is fully charged it is shown upon the board and the wind mill or generator is automatically dis-

connected from the battery. The storage battery can be placed in any convenient place, probably the cellar or some out-building on the premises.

To Clean Grimy Saucepans

A little kerosene oil on a paper napkin or a rag, will quickly remove the grease and soot that gathers from the fire on the bottom of saucepans.



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DO YOU KNOW that there has been dug up from the ruins of old Chaldea a complete story of the Flood—the same in every detail as Moses' account in Genesis—and that it was written thousands of years before his version appeared? Hardly one in a million has ever had an opportunity of seeing this startling story—HAVE YOU? But it is one of the many thousand curiously interesting accounts in

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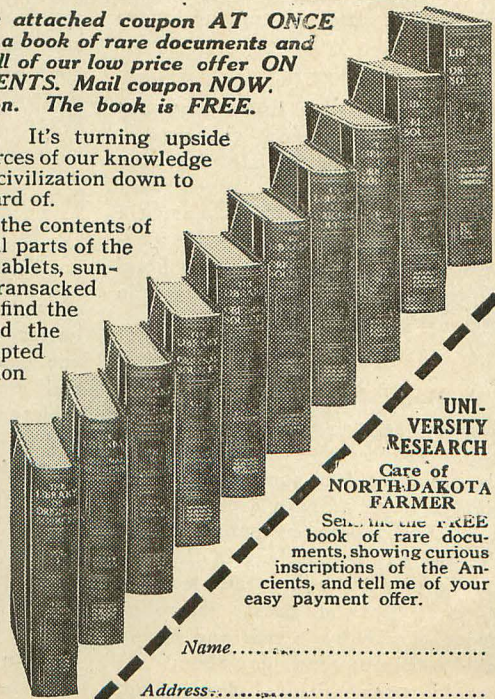
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HOUSEHOLD HINTS

If a cotton dress has faded until it is unsightly, the color can be removed entirely by boiling it in water in which cream of tartar has been dissolved. This takes out all the color and leaves the fabric perfectly white.

In Frying Doughnuts

The best test is to put a small piece of the dough in the pan and cook it. If it sinks to the bottom and quickly reappears, increased in bulk, the fat is at the right temperature.

Do not attempt to cook too many crullers at one time, as they cool the fat, and consequently absorb grease. Four or five are the most that should be attempted at once. After draining, shake them in a paper bag with a little sugar.

After frying any dough mixture, the fat will appear cloudy from the flour that has fallen into it, but if one or two raw potatoes are then cooked in the fat this cloudiness will disappear.

All frying fat should be strained thru a fine sieve or cheese-cloth before using, to remove any foreign particles that have fallen into it from the food. If not removed these will burn and cover the next article cooked with black specks.

Nearly every housewife is troubled by the white heat spots on her dining table. These spots may be removed by applying the following in their respective order, using a separate cloth for each: kerosene, alcohol, and sweet or linseed oil. The latter should be well rubbed in until the spot no longer shows.

When grinding dry bread thru the food chopper, to prevent the crumbs scattering, tie a paper bag over the mouth of the chopper. When thru empty the bag into a two-quart tin pail and put on the cover. Just below the top of the pail punch air holes all around and you will find that the crumbs keep any length of time.

A Home-Made Baby Pen

A great help in taking care of a nine-months-old baby is a light dry-goods box, two feet square, and high enough to reach to baby's chest. The box is covered with cretonne, padded inside, and has a thick rug in the bottom. Castors at each corner make it easy to roll from room to room. Knowing that baby is safe and happy in the pen one can go about her household work with a clear mind, free from interruptions.

Seasonable Receipts

Mrs. Sadie Baird, Editor

Mashed Potatoes

To each quart of potatoes add salt and white pepper to taste, half a cup of hot sweet cream, a generous lump of butter, and the well beaten yolk of one egg. Smooth the top over daintily with soft butter, and place in a hot oven for two minutes.

Baked Squash

Cut a squash in two pieces, and bake in a hot oven until soft. Scrape out of the shell, mash smooth, add butter and salt (also a little hot cream or milk if too dry) and put in a heated dish.

Celery and Beet Salad

Dice equal quantities of crisp celery and cold boiled beets, moisten with a good mayonnaise, and serve in small thin beet cups which have stood in vinegar for several hours. Put a spoonful of mayonnaise on top and set each cup on a mat of fringed celery.

Mince Meat

Chop fine three pounds of lean boiled beef and one pound of beef suet, add three quarts of nice tart apples, finely chopped, two pounds of stoned and chopped raisins, three pounds of currants (washed and dried carefully), one-half pound of citron cut in thin strips, two cups molasses, two cupfuls sugar, three tablespoons salt, two grated nutmegs, one and one-half tablespoons each of cinnamon and allspice, one tablespoon of cloves, and three quarts of water. Mix the materials thoroly, put over the fire, and let come to a boil. Seal hot in glass jars. This is an excellent mince meat and will keep indefinitely. When wanted line deep pie plates with good paste, fill with the mince meat, cover with puff paste, and bake in a hot oven. Reheat when time to serve.

Apple Batter Pudding

A nice apple batter pudding is made after the following manner: Make a batter with one cupful of sour milk, one egg, a level teaspoonful of salt, and one-half cup of sugar and a tablespoonful of melted butter; then add a teaspoonful of soda. Pare, core and slice some tart, juicy apples and cut into small pieces; then stir into the batter, using about a cupful of the apples to the amount of batter given unless you wish it very thick with apples. Pour into a pan and bake until done.

Apple Sago or Tapioca Pudding

For these the apples are cored and pared, placed in a buttered pudding

dish, and the centers filled with sugar with which has been mixed a little spice and salt. Then pour over the tapioca or sago, which has already been cooked for a half hour with five times its bulk of boiling water. Bake until the apples are perfectly soft, turning each one over in the tapioca when half done.

These are best liked when served cool with cream.

Chicken Loaf

After cleaning the chicken, let it simmer until tender. The length of time required will depend upon the

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age of the fowl. Long cooking is sometimes required, but the water should never boil. When tender remove from the fire, and cool in the liquor in which it has been boiled. Cut the meat from the bones, keeping the white and dark meat separate. Cut in small pieces, season well with pepper and salt, and reheat in some of the liquor. Pack tightly in a mould, arranging the meat in layers. If but one chicken is used, the center layer would naturally be of the white meat. Leave in a cool place several hours before serving. The remains of a roast can be utilized in this way. Gelatine can be added to the liquor if desired.

Quince and Apple Preserve

One-third weight of sweet apples, two-thirds quince, or this proportion may be varied; but the weight of sugar and fruit should be nearly equal. All the fruit to be pared, cored, and quartered. Boil the quinces tender in clear water. Make a syrup and put in the quinces first, then the apples, and boil all together till they look red and clear. An hour and a half will not be too long; but watch lest they burn.

Jelly Roll

Three eggs, beaten light, one cup of sugar, beat again, one cup of flour in which one-half teaspoon of soda and one teaspoon of cream tartar have been sifted, beat again, then add one teaspoon of lemon extract and beat thoroly together. Turn in a buttered biscuit tin and bake in a moderate oven. Don't let it get crusty. As soon as baked turn out on a cloth, and spread with jelly as quickly as you can, roll, and wrap a napkin tightly around it. If the edges get crusty trim them off before rolling. This never fails, and improves by being kept several days.

Raisin Bread

Ordinary home-made bread dough; mix in half a pound of seeded raisins for each two loaves of bread, and bake in the usual way. The children will cry for it. Give it to them, for it will do no harm, but will help remove the

row of medicine bottles on the upper pantry shelf.

Mashed Turnips

Pare, cut in rather small pieces, and boil quickly until quite tender. Drain very dry, add hot cream, butter and seasoning, and mash perfectly smooth.

Rice and Fig Pudding

Two cupfuls of cooked rice mixed with one and one-half cupfuls sweet milk, the beaten yolks of two eggs, a pinch of salt, half a cupful of sugar, and a teaspoonful of vanilla. Cover the bottom of a baking dish with this mixture, add a layer of chopped figs, and finish with one of rice dotted with bits of butter. Bake for half an hour in a moderate oven, and serve hot with sweet sauce or cream.

Relish

Two gallons of cabbage, one gallon tomatoes, one gallon onions, each chopped fine. Mix with this one cup salt and let stand over night. Drain and add one gallon vinegar, one and one-half pound brown sugar, one ounce whole black pepper, one ounce cloves, one ounce allspice, one ounce celery seed, one ounce white mustard seed. Cook until tender.

Grape Conserve

One basket Concord grapes, three pounds sugar, two pounds raisins, one-half pound walnut meats. Pulp grapes, stew the pulp and put thru a sieve. Add sugar, skins of the grapes, nut meats and raisins and cook till thick or one-half hour.

Carrot Pickles

Take 7 lbs. of carrots that have been peeled and scraped, put in kettle of boiling water; add 1 teaspoon of salt; let boil until tender, drain and cut in pieces about 2 inches long. Take 3 pounds of brown sugar, one and one-half quart of vinegar. Let boil up once, then add 3 drops each of oil cinnamon and cloves. Put in the carrots, let come to a boil. Put in jar and seal.

BOILED CABBAGE

Trim off the outside leaves, cut each head into eighths, and put into the kettle with a small amount of boiling salted water. Cook until tender, remove to the back of the range to keep warm, until ready to serve, then prepare White Sauce and pour over it.

White Sauce: Put into a saucepan one cupful of milk. Heat to the boiling point, and add two level tablespoonfuls of flour and a little less of water, mixed smoothly. Let cook until it thickens and ceases to taste of raw flour, season with salt and pepper, pour over boiled cabbage, and serve.

This may be made with butter in the usual way if desired.

Hollandaise Sauce: Pour one cup of White Sauce, without butter, boiling hot, over a beaten egg, pouring slowly and beating rapidly; add one tablespoonful of vinegar or lemon juice. Put over the fire, and heat until the egg cooks a little, but do not allow it to curdle. Season and serve.

Vegetable Salad

One can each kidney-beans, string beans, and peas. Wash and drain the kidney beans. Drain peas and string beans. Add to this sliced cucumbers, or chopped olives. Just before serving, put over a very thick salad dressing. May be made of left-overs of the fresh vegetables.



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